

## CLAIMS

1. A method for diagnosing the normality/abnormality of an output of an installed photovoltaic power system, comprising the steps of:  
comparing a reference output characteristic obtained in accordance with an installation condition of said photovoltaic power system with an output characteristic in said photovoltaic power system during operation; and  
diagnosing the normality/abnormality of the output of said photovoltaic power system based on the comparison result.

2. The diagnosis method according to Claim 1, wherein  
the installation condition of said photovoltaic power system includes, at least, one of the following: installation site, installation direction, installation angle and configuration.

3. The diagnosis method according to Claim 1, further comprising the step of:  
diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

4. The diagnosis method according to Claim 1, wherein  
the reference output characteristic and the output characteristic include, at least, one of the following: direct current voltage, alternating current voltage, direct current electric energy

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5. A method for diagnosing the normality/abnormality of an output of an installed photovoltaic power system, comprising the steps of:

calculating a reference output characteristic at the time of normal operation in accordance with an installation condition of said photovoltaic power system;

comparing the calculated reference output characteristic with the measured output characteristic; and

6. The diagnosis method according to Claim 5, wherein

7. The diagnosis method according to Claim 5, further comprising the step of:

diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

8. The diagnosis method according to Claim 5, wherein  
the reference output characteristic and the output  
characteristic include, at least, one of the following: direct current  
voltage, alternating current voltage, direct current electric energy  
and alternating current electric energy.

9. A method for diagnosing the normality/abnormality of an output  
of a photovoltaic power system, comprising the step of:

diagnosing the normality/abnormality of the output of said  
photovoltaic power system during operation based on a past  
measurement result of output characteristic of said photovoltaic  
power system.

10. A method for diagnosing the normality/abnormality of an output  
of a photovoltaic power system, comprising the steps of:

obtaining a reference output characteristic at the time of  
normal operation in accordance with a past measurement result of  
output characteristic of said photovoltaic power system;

measuring an output characteristic in said photovoltaic  
power system during operation;

comparing the obtained reference output characteristic with  
the measured output characteristic; and

diagnosing the normality/abnormality of the output of said  
photovoltaic power system based on the comparison result.

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11. The diagnosis method according to Claim 10, wherein

the reference output characteristic is obtained differently for each period of time among the plurality of periods of time gained by dividing a year.

12. The diagnosis method according to Claim 10, wherein

in the case that the output of said photovoltaic power system is diagnosed as being abnormal, the output characteristic at that time is not reflected in the subsequent reference output characteristic while, in the case that the output of said photovoltaic power system is diagnosed as being normal the output characteristic at that time is reflected in the subsequent reference output characteristic.

13. The diagnosis method according to Claim 10, further comprising the step of:

diagnosing the cause, in the case that the output of said photovoltaic power system is abnormal, based on the comparison result.

14. The diagnosis method according to Claim 10, wherein

the reference output characteristic and the output characteristic include, at least, one of the following: direct current voltage, alternating current voltage, direct current electric energy and alternating current electric energy.

15. A method for diagnosing the normality/abnormality of an output of a photovoltaic power system, comprising the steps of:

obtaining a reference output characteristic at the time of normal operation of a first photovoltaic power system to be diagnosed in accordance with a measurement result of output characteristic of a second photovoltaic power system which is different from said first photovoltaic power system;

measuring an output characteristic in said first photovoltaic power system during operation;

comparing the obtained reference output characteristic with the measured output characteristic; and

diagnosing the normality/abnormality of the output of said first photovoltaic power system based on the comparison result.

16. An apparatus for carrying out a diagnosis of the normality/abnormality of an output of an installed photovoltaic power system and/or a diagnosis of the cause in the case that the output of said photovoltaic power system is abnormal, comprising:

a storage unit for storing a reference output characteristic which has been obtained in advance in accordance with an installation condition of said photovoltaic power system;

a measurement unit for measuring an output characteristic in said photovoltaic power system during operation; and

a comparison unit for comparing the reference output

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characteristic stored in said storage unit with the output characteristic measured by said measurement unit.

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17. The diagnosis apparatus according to Claim 16, further comprising:

a storage unit for storing the output characteristic measured by said measurement unit.

18. The diagnosis apparatus according to Claim 16, further comprising:

a solar radiation amount measurement unit for measuring an amount of solar radiation in said photovoltaic power system.

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19. An apparatus for carrying out a diagnosis of the normality/abnormality of an output of an installed photovoltaic power system and/or a diagnosis of the cause in the case that the output of said photovoltaic power system is abnormal, comprising:

an input unit for accepting an input of an installation condition of said photovoltaic power system;

a calculation unit for calculating a reference output characteristic of said photovoltaic power system, in accordance with the installation condition inputted to said input unit;

a measurement unit for measuring an output characteristic in said photovoltaic power system during operation; and

a comparison unit for comparing the reference output

characteristic calculated by said calculation unit with the output characteristic measured by said measurement unit.

20. The diagnosis apparatus according to Claim 19, further comprising:

a storage unit for storing output the characteristic measured by said measurement unit.

21. The diagnosis apparatus according to Claim 19, further comprising:

a solar radiation amount measurement unit for measuring an amount of solar radiation in said photovoltaic power system.

22. An apparatus for carrying out a diagnosis of the normality/abnormality of an output of a photovoltaic power system, comprising:

a storage unit for storing a measurement result of output characteristic of said photovoltaic power system; and

a diagnosis unit for diagnosing the normality/abnormality of the output of said photovoltaic power system based on the measurement result stored in said storage unit.

23. The diagnosis apparatus according to Claim 22, further comprising:

a determination unit for determining the cause of the

